

Title (en)  
Gas-barrier multi-layer structure

Title (de)  
Gasundurchlässige Mehrschichtstruktur

Title (fr)  
Structure multicouche imperméable aux gaz

Publication  
**EP 1413429 B1 20070530 (EN)**

Application  
**EP 03022701 A 20031009**

Priority  
JP 2002306692 A 20021022

Abstract (en)  
[origin: EP1413429A1] A gas-barrier multi-layer structure comprises gas-barrier layer(s) A and thermoplastic resin layer(s) B. The gas-barrier layer A comprises a crystallizable polyamide resin produced by polycondensing a diamine component containing  $\geq 70$  mole% m-xylylenediamine with a dicarboxylic acid component containing 80-97 mole% 4-20C  $\alpha$ ,  $\omega$ -linear aliphatic dicarboxylic acid and 3-20 mole% isophthalic acid. A gas-barrier multi-layer structure comprises gas-barrier layer(s) A and thermoplastic resin layer(s) B. The gas-barrier layer A comprises a crystallizable polyamide resin produced by polycondensing a diamine component containing  $\geq 70$  mole% m-xylylenediamine with a dicarboxylic acid component containing 80-97 mole% 4-20C  $\alpha$ ,  $\omega$ -linear aliphatic dicarboxylic acid and 3-20 mole% isophthalic acid. The crystallizable polyamide resin has a minimum half crystallization time of 40-2000 seconds in a measuring temperature range from a glass transition point to less than a melting point when measured by isothermal crystallization according to depolarization photometry.

IPC 8 full level  
**B32B 27/34** (2006.01); **C08G 69/26** (2006.01)

CPC (source: EP US)  
**B32B 27/34** (2013.01 - EP US); **C08G 69/265** (2013.01 - EP US); **Y10T 428/1352** (2015.01 - EP US); **Y10T 428/1393** (2015.01 - EP US); **Y10T 428/31725** (2015.04 - EP US)

Cited by  
RU2664209C1; EP1475403A1; EP1479712A1; US7053172B2; US7053171B2

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 1413429 A1 20040428**; **EP 1413429 B1 20070530**; AU 2003252855 A1 20040506; AU 2003252855 B2 20080918; CN 100469571 C 20090318; CN 1508008 A 20040630; DE 60314074 D1 20070712; DE 60314074 T2 20070913; US 2004076781 A1 20040422; US 7258929 B2 20070821

DOCDB simple family (application)  
**EP 03022701 A 20031009**; AU 2003252855 A 20031008; CN 200310124807 A 20031022; DE 60314074 T 20031009; US 68202703 A 20031010